

APPENDIX B

Henry's Law Constants (K_H , atm-m³/mol) For Selected Organic Compounds

[Data Obtained from Mabey et al. (1982) and Mackay and Shiu (1981)]

Compound	K_H	T (K) ^a	Compound	K_H	T (K) ^a
Chlorinated Aromatics			1,2-Dichloropropane	2.3×10^{-3}	293
Chlorobenzene	3.6×10^{-3}	293/298	trans-1,3-Dichloropropene	1.3×10^{-3}	293/298
o-Dichlorobenzene	1.9×10^{-3}	293	Hexachlorocyclopentadiene	1.6×10^{-2}	298
m-Dichlorobenzene	3.6×10^{-3}	298	Hexachlorobutadiene	2.6×10^{-2}	293
p-Dichlorobenzene	3.1×10^{-3}	298	Monocyclic Aromatics (MAH)		
1,2,4-Trichlorobenzene	2.3×10^{-3}	298	Benzene	5.5×10^{-3}	298
Hexachlorobenzene	6.8×10^{-4}	293/298	Toluene	6.7×10^{-3}	293
Halogenated Nonaromatics			Ethylbenzene	6.6×10^{-3}	293
Methyl chloride	4×10^{-2}	293	o-Xylene	5×10^{-3}	298
Methyl bromide	2×10^{-1}	293	m-Xylene	7×10^{-3}	298
Methylene chloride	2×10^{-3}	293/298	p-Xylene	7.1×10^{-3}	298
Chloroform	2.9×10^{-3}	293	Styrene	2.75×10^{-3}	293
Bromodichloromethane	2.4×10^{-3}	293/295	1,2,3-Trimethylbenzene	3.2×10^{-3}	298
Dibromochloromethane	9.9×10^{-4}	293/295	1,2,4-Trimethylbenzene	5.9×10^{-3}	298
Bromoform	5.6×10^{-4}	293	1,3,5-Trimethylbenzene	6×10^{-3}	298
Dichlorodifluoromethane	3.0×10^1	298	Propylbenzene	7×10^{-3}	298
Trichlorofluoromethane	1.1×10^{-1}	293	Isopropylbenzene	1.3×10^{-3}	298
Carbon tetrachloride	2.3×10^{-2}	293	1-Ethyl-2-methylbenzene	4.3×10^{-3}	298
Chloroethane	1.5×10^{-1}	293	1-Ethyl-4-methylbenzene	5×10^{-3}	298
1,1-Dichloroethane	4.3×10^{-3}	293	n-Butylbenzene	1.3×10^{-2}	298
1,2-Dichloroethane	9.1×10^{-4}	293	Isobutylbenzene	3.3×10^{-2}	298
1,1,1-Trichloroethane	3×10^{-2}	298	sec-Butylbenzene	1.4×10^{-2}	298
1,1,2-Trichloroethane	7.4×10^{-4}	293	tert-Butylbenzene	1.2×10^{-2}	298
1,1,2,2-Tetrachloroethane	3.8×10^{-4}	293	1,2,4,5-Tetramethylbenzene	2.5×10^{-2}	298
Hexachloroethane	2.5×10^{-3}	293/295	n-Pentylbenzene	6×10^{-3}	298
Vinyl chloride	8.1×10^{-2}	298	Polycyclic Aromatics (PAH)		
1,1-Dichloroethene	1.9×10^{-2}	298/293	Naphthalene	4.6×10^{-4}	298
trans-1,2-Dichloroethene	6.7×10^{-2}	293	Acenaphthene	9.1×10^{-5}	298
cis-1,2-Dichloroethene	3.7×10^{-3}	293	Acenaphthylene	1.5×10^{-3}	293/298
Trichloroethene	9.1×10^{-3}	293	Anthracene	8.6×10^{-5}	298
Tetrachloroethene	1.5×10^{-2}	293	Phenanthrene	2.3×10^{-4}	298
Pesticides and Related Compounds, and PCBs, Dioxins and Furans			Ethers		
Ethylene dibromide (EDB) ^b	8.2×10^{-4}	298	Bis(chloromethyl)ether	2.1×10^{-4}	293/298
trans-Chlordane	9.4×10^{-5}	298	Bis(2-chloroethyl)ether	1.3×10^{-4}	293

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Compound	K_H	T (K)^a	Compound	K_H	T (K)^a
Heptachlor	4×10^{-3}	298	2-Chloroethylvinylether	2.5×10^{-4}	293
Heptachlor epoxide	3.9×10^{-4}	298	Methyl tert-butylether (MTBE)	5.9×10^{-4}	293
Tetrahydrofuran	7×10^{-5}	298	Bis(2-chloroisopropyl)ether	1.1×10^{-4}	293
Aroclor 1016 ^c	3.3×10^{-4}	298	4-Chlorophenylphenylether	2.2×10^{-4}	293
Aroclor 1221 ^c	1.7×10^{-4}	298	4-Bromophenylphenylether	1×10^{-4}	293/298
Aroclor 1242 ^c	2×10^{-3}	298	Ketones		
Aroclor 1248 ^c	3.6×10^{-3}	298	Acetone	4×10^{-5}	293
Aroclor 1254 ^c	2.6×10^{-3}	—	2-Butanone	5.7×10^{-5}	293
Tetrahydrofuran	7×10^{-5}	298	4-Methyl-2-pentanone	1.4×10^{-4}	293

^aWhere two temperatures are given, the first is the temperature at which the vapor pressure was measured, and the second is the temperature at which the solubility was measured.

^bVapor pressure data from Stull (1947), and solubility data from Stephen and Stephen (1963).

^cMixture-average value.